

REMARKS

Applicants appreciate the thorough examination and detailed explanations of the rejections by the Examiner as reflected in the Office Action of April 2, 2008 (hereinafter, "the Office Action"). Applicants respond herein to each of the issues raised in the Office Action. Applicants respectfully submit that the present application is in condition for allowance for the reasons discussed below.

The Claim Rejections Under 35 U.S.C. § 112, ¶ 2

The Office Action asserts that the use of the phrase "and/or" renders Claims 1-28 indefinite under 35 U.S.C. § 112, ¶ 2, because it is unclear whether the recitations following the phrase are part of the claimed subject matter. Office Action, page 2. Applicants respectfully disagree with the Office Action's assertion, and submit that ample precedent exists for the use of "and/or" in claim recitations. In fact, a search of the USPTO Patent Full-Text and Image Database at <http://patft.uspto.gov> indicates that, as of August 14, 2008, 146,593 issued U.S. patents include the phrase "and/or" in their claims. Applicants further note that every instance of the phrase "and/or" in Claims 1-28 of the present application occurs in the context of either "Quality of Service (QoS) and/or bandwidth allocation" or "a Network Service Provider (NSP) and/or an Application Service Provider (ASP)." Applicants respectfully submit that the use of "and/or" in these particular contexts is not indefinite, as a person of ordinary skill in the art would understand the phrase to mean "both or either" of the two given alternatives. The recitation in Claim 1 of "managing Quality of Service (QoS) and/or bandwidth allocation," for instance, is understood by one of skill in the art to encompass management of both QoS and bandwidth allocation, and management of either QoS or bandwidth allocation.

Accordingly, Applicants respectfully submit that such usage of the phrase "and/or" is sufficiently definite to satisfy the requirements of 35 U.S.C. § 112, ¶ 2, and request withdrawal of the § 112, ¶ 2 rejection for at least the foregoing reasons. Applicants further respectfully submit that there is no basis for declining to consider the claim recitations following the phrase "and/or," as was stated at page 2 of the Office Action, and request reconsideration of the claims in their entirety. Alternatively, if the Examiner can suggest

appropriate language to use in place of "and/or," Applicants would be more than willing to amend the present claims to incorporate such terminology.

The Claim Rejections Under 35 U.S.C. § 102(e)

Claims 1-4, 6-13, 15-23, and 25-28 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2003/0056092 to Edgett et al. ("Edgett "). Office Action, page 2. These rejections are respectfully traversed.

Independent Claims 1 and 20 Are Patentable Over Edgett

Applicants respectfully traverse the rejections of Claims 1 and 20 on the grounds that the portions of Edgett cited by the Office Action in support of the rejections fail to disclose or suggest all of the recitations of Claims 1 and 20.

Claim 1 recites as follows:

A data architecture for managing Quality of Service (QoS) and/or bandwidth allocation in a Regional/Access Network (RAN) that provides end-to-end transport between a Network Service Provider (NSP) and/or an Application Service Provider (ASP), and a Customer Premises Network (CPN) that includes a Routing Gateway (RG), the architecture comprising:

a NSP access session record maintained at the RAN that defines QoS and/or bandwidth allocation for an access session associated with the RG and the NSP;

a corresponding NSP access session record maintained at the NSP associated with the access session, wherein the NSP access session record at the RAN and the corresponding NSP access session record at the NSP both define a QoS and/or bandwidth allocation specified by the NSP associated with the session or both define a QoS and/or bandwidth allocation specified by the RAN;

an application flow record maintained at the RAN that defines QoS and/or bandwidth allocation for an application flow associated with the RG and the ASP; and

a corresponding application flow record maintained at the ASP associated with the application flow, wherein both the application flow record at the RAN and the corresponding application flow record at the ASP define a QoS and/or bandwidth allocation specified by the ASP (emphasis added).

In rejecting independent Claim 1, the Office Action asserts that all of the recitations of Claim 1 are disclosed by paragraphs [0251] to [0257] and various figures of Edgett. Office

Action, pages 3-4. The Office Action first appears to equate the "transaction data record" discussed by Edgett in paragraphs [0251] to [0257] with the "access session record" recited by Claim 1. Office Action, page 3. These transaction data records are described as being generated by a terminal server 470 and sent to an authorization server 600 when a roaming user 502 connects or disconnects from a remote ISP 506. Edgett, paragraphs [0252], [0253]. The transaction data records may include a user identification string and a unique session identifier, and are maintained at a transaction server 468, which may use them to generate usage reports including such data as the identity of the user, the location of the service access, and the length, cost, and time of the service access. Edgett, paragraphs [0252]-[0255]. Edgett also describes how the transaction data records may also be used to generate bills or invoices to customers and to make payments to service providers. Edgett, paragraph [0256].

However, Applicants respectfully submit that the transaction data records of Edgett do not disclose or suggest the access session records recited by Claim 1. Edgett's transaction data records are nowhere described in the portion cited by the Office Action as containing or being comprised of data elements defining QoS and/or bandwidth allocation. Indeed, Applicants submit that Edgett fails to disclose or suggest that transaction data records have any relevance at all to defining QoS and/or bandwidth allocation, as recited by Claim 1. Edgett instead describes the transaction data records as serving a reporting function only, in that their purpose appears to be to provide data for generating usage reports and billing invoices. At most, the transaction data records of Edgett could inferentially disclose bandwidth usage; however, bandwidth usage is distinct from bandwidth allocation. Likewise, while the system described by Edgett may collect and analyze QoS information (Edgett, paragraph [0093]), collection and analysis is distinct from defining QoS policies, as recited by Claim 1. Furthermore, Edgett nowhere describes the transaction data records as being maintained at both the RAN and the NSP as recited by Claim 1, and the Office Action fails to provide a specific cite to any other portion of Edgett disclosing or suggesting this recitation of Claim 1.

The Office Action further states on pages 3-4 that the "application flow record...that defines QoS and/or bandwidth allocation" recited by Claim 1 is somehow disclosed by paragraphs [0251]-[0257] and **FIGS. 14, 16, and 17A** of Edgett. Office Action, pages 3-4.

The Office Action alleges that "figure 17A shows, customer tables, access point tables, pricing tables, CDR tables, accounting tables, authentication transaction storage area or tables, batch history storage area or tables and SQM storage or tables." Office Action, pages 3-4. Applicants, however, were unable to determine from the Office Action how **FIG. 17A** relates to the "application flow record...that defines QoS and/or bandwidth allocation" recited by Claim 1. Applicants were likewise unable to locate any disclosure or suggestion in the cited portion of Edgett of an "application flow record...that defines QoS and/or bandwidth allocation," as recited by Claim 1.

Accordingly, Applicants respectfully submit that the above-quoted recitations of Claim 1 are not disclosed or suggested by Edgett, and therefore that Claim 1 is patentable for at least these foregoing reasons. Applicants further respectfully submit that independent Claim 20 is patentable for at least reasons substantially similar to those described above with respect to the patentability of independent Claim 1. Should the rejection of Claims 1 and 20 be maintained, Applicants request that a more specific explanation of the applicability of the cited portions of Edgett be provided, and that the rejection be made non-final to allow Applicants an opportunity to fully respond based on such explanation.

The claims depending from Claims 1 and 20 are patentable at least per the patentability of the independent claims from which they depend. Moreover, many of the dependent claims are separately patentable, as is discussed below.

Dependent Claim 2 Is Separately Patentable over Edgett

Applicants respectfully traverse the rejection of dependent Claim 2 for at least the reasons discussed above regarding the patentability of independent Claim 1. Moreover, Applicants submit that dependent Claim 2 is separately patentable over Edgett because the cited portion of Edgett fails to disclose all of the recitations of Claim 2.

Claim 2 recites, in part, as follows:

a corresponding NSP access session record maintained at the RG associated with the access session, wherein the NSP access session record at the RAN and the corresponding NSP access session record at the RG both define a QoS and/or bandwidth allocation specified by the NSP associated with the session or both define a QoS and/or bandwidth allocation specified by the RAN; and

a corresponding application flow record maintained at the RG associated with the application flow, wherein both the application flow record at the RAN and the corresponding application flow record at the RG define a QoS and/or bandwidth allocation specified by the ASP.

The Office Action cites generally to **FIG. 3** and paragraphs **[0164]** and **[0227]** through **[0234]** of Edgett in rejecting Claim 2. Office Action, pages 4-5. However, the paragraphs relied upon by the Office Action appear to merely describe the use of the Secure Password Authentication Protocol (PAP) (Edgett, paragraph **[0164]**), the routing of authentication requests from the remote ISP to the home ISP (Edgett, paragraphs **[0227]**-**[0228]**), and the use of a unique session identification to associate transaction records related to a single user session (Edgett, paragraphs **[0231]**-**[0234]**). Applicants respectfully note that no mention is made of defining QoS or of defining bandwidth allocation in the cited portion of Edgett, and the Office Action does not explain with any specificity what elements described by Edgett, if any, correspond to the "NSP access session record maintained at the RG" or the "application flow record maintained at the RG," as recited by Claim 2.

Accordingly, Applicants respectfully submit that Claim 2 is separately patentable for at least the above reasons. Should the rejection of Claim 2 be maintained, Applicants request that a more specific explanation of the applicability of the cited portions of Edgett be provided, and that the rejection be made non-final to allow Applicants an opportunity to fully respond based on such explanation.

Dependent Claims 3, 17, and 23 Are Separately Patentable over Edgett

Applicants respectfully maintain that Claims 3, 17, and 23 are each patentable per the patentability of the independent claims from which they depend, and further submit that each is separately patentable as well. Each of these claims includes the recitation of "an application service provider session record maintained at the RAN that defines QoS and/or bandwidth allocation," along with "a corresponding application service provider session record maintained at the RG."

In rejecting Claims 3 and 17, the Office Action cites generally to the "summary and Fig. 3 par. 0073-0082." Office Action, pages 5 and 8-9. With respect to Claim 23, the Office

Action refers only to "the same rationale as claims 1-4, 6-13, and 15-19." Office Action, page 10. Because Claim 23 contains recitations corresponding to those of Claims 3 and 17, Applicants presume that the rejection of Claim 23 is also premised on the same portions of Edgett cited above.

Applicants note that the paragraphs from Edgett cited by the Office Action appear to describe a network configuration allowing for the secure authentication of a remote user. However, there appears to be no disclosure or suggestion of application service provider session records maintained at both the RAN and the RG, or of such records defining QoS and/or bandwidth allocation, as recited by Claims 3, 17, and 23. Moreover, the Office Action fails to cite with any specificity to any other portion of Edgett disclosing the above-quoted recitations of Claims 3, 17, and 23. Accordingly, Applicants respectfully submit that Claims 3, 17, and 23 are separately patentable for at least these reasons, as are the dependent claims thereof. If the rejections are not withdrawn, Applicants request that a clearer explanation of the applicability of Edgett be provided, and that the rejections be made non-final to afford Applicants a full and fair opportunity to respond based on such explanation.

Dependent Claim 12 Is Separately Patentable Over Edgett

Applicants respectfully maintain that Claim 12 is patentable for at least the reasons discussed above with respect to independent Claim 1 and dependent Claim 3, and further that Claim 12 is separately patentable. Claim 12 recites, among other things, a user-associated NSP access session record maintained at the RAN, and corresponding user associated NSP access session records at the different NSP and the RG, wherein the access session records "each define a QoS and/or bandwidth allocation specified by the different NSP or each define a QoS and/or bandwidth allocation specified by the RAN."

The Office Action provides only non-specific citations to paragraphs [0089]-[0108] and [0251]-[0278] of Edgett in concluding that Edgett discloses the above-quoted recitations of Claim 12. However, Applicants cannot locate in the cited paragraphs any disclosure or suggestion of access session records maintained at the RAN, the different NSP, and the RG, nor can Applicants find any mention of records that define a QoS and/or bandwidth allocation, as recited by Claim 12.

As a result, Applicants submit that Claim 12 is separately patentable for at least these foregoing reasons. Should the rejection of Claim 12 be maintained, Applicants request that a more specific explanation of the applicability of the cited portions of Edgett be provided, and that the rejection be made non-final to allow Applicants an opportunity to fully respond based on such explanation.

Dependent Claim 22 Is Separately Patentable Over Edgett

Applicants respectfully traverse the rejection of Claim 22 for at least the same reasons regarding the patentability of independent claim 20, and further submit that Claim 22 is separately patentable as well. Claim 22 recites, in part, an application flow record maintained at the RAN and a corresponding application flow record maintained at the RG, "wherein both the application flow record at the RAN and the corresponding application flow record at the RG define a QoS and/or bandwidth allocation specified by the ASP or both define a QoS and/or bandwidth allocation specified by the RAN or both define a QoS and/or bandwidth allocation specified by the RG." The Office Action notes only that Claim 22 was rejected "under the same rationale as claims 1-4, 6-13, and 15-19." Office Action, page 10.

As noted above, Applicants have been unable to locate any disclosure or suggestion of application flow records maintained at the RAN and at the RG that define a QoS and/or bandwidth allocation in the portions of Edgett previously relied upon by the Office Action. Moreover, the Office Action does not identify or cite with particularity any other paragraphs of Edgett to support the rejection of Claim 22. Accordingly, Applicants respectfully maintain that Edgett does not teach all the recitations of Claim 22, and therefore that Claim 22 is separately patentable for at least the foregoing reasons. If the rejection of Claim 22 is maintained, Applicants request that a more specific explanation of the applicability of the cited portions of Edgett be provided, and that the rejection be made non-final to allow Applicants an opportunity to fully respond based on such explanation.

The Claim Rejections Under 35 U.S.C. § 103(a)

Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Edgett in view of U.S. Patent Publication No. 2004/0165592 to Chen et al. ("Chen"). Office Action,

page 10. Claims 14 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Edgett in view of U.S. Patent No. 7,073,055 to Freed ("Freed"). Office Action, page 11. Applicants respectfully submit that Claims 5, 14, and 24 are patentable for at least the reasons discussed in detail below.

Claim 5 Is Separately Patentable Over Edgett in View of Chen

Applicants respectfully traverse the rejection of Claim 5 on the grounds that Edgett and Chen, either alone or in combination, fail to disclose or suggest all of the recitations of Claim 5. Claim 5 recites, in part, "a DSL line element maintained at the RG associated with the xDSL line that includes a line identifier and the synchronization rate of the xDSL line; and a corresponding DSL line element including the line identifier and the synchronization rate of the xDSL line maintained at the RAN." In rejecting Claim 5, the Office Action acknowledges that Edgett does not disclose or suggest the above-quoted recitations of Claim 5, but asserts that paragraphs [0025] to [0033] of Chen supply the missing teachings. Office Action, pages 10-11.

The portion of Chen relied upon by the Office Action describes a network infrastructure through which a subscriber **10** can select a peer device and request QoS connections to the peer device. Chen, paragraphs [0025]-[0034]. The infrastructure includes an LDAP (Lightweight Directory Access Protocol) server or directory **30** that receives subscriber and network information including a switch identifier, such as an IP address or switch-specific proprietary address, and DSL synchronization rates. Chen, paragraph [0032]. The LDAP server **30** may use this data to generate responses to queries from connection server **25**. Chen, paragraph [0032]. Applicants respectfully submit, however, that the cited portion of Chen does not disclose or suggest that the network infrastructure includes any element associated with the xDSL line that includes a line identifier (as opposed to the switch identifier discussed by Chen), and is maintained at the RG and the RAN, as recited by Claim 5. Accordingly, Applicants respectfully submit that Claim 5 is not rendered obvious by Edgett and Chen, and is separately patentable for at least the foregoing reasons.

In re: Adamczyk et al.
Serial No.: 10/722,696
Filed: November 24, 2003
Page 17 of 17

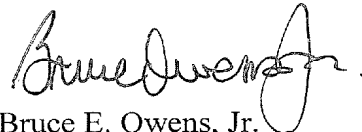
Claims 14 and 24 Are Patentable Over Edgett in View of Freed

Applicants note that dependent Claims 14 and 24 ultimately depend from independent Claims 1 and 20 respectively, the rejection of which under § 102(e) is discussed in detail above. In rejecting Claims 14 and 24 as obvious under § 103(a), the Office Action relies on the alleged disclosures of Edgett with respect to the parent claims. Office Action, page 11. However, Applicants respectfully submit that the Office Action provides no citation to any portions of Chen to overcome the deficiencies noted above with respect to Claims 1 and 20. Accordingly, Applicants respectfully submit that dependent Claims 14 and 24 are patentable for at least the same reasons discussed above with respect to the patentability of independent Claim 1.

Conclusion

Applicants respectfully submit that, for the reasons discussed above, the references cited in the present rejections do not disclose or suggest the claimed subject matter. Accordingly, Applicants respectfully request allowance of all the pending claims and the passing of this application to issue.

Respectfully submitted,



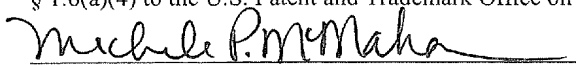
Bruce E. Owens, Jr.
Registration No. 58,685
Attorney for Applicants

Customer Number 39072

Myers Bigel Sibley & Sajovec, P.A.
P.O. Box 37428, Raleigh, NC 27627
919-854-1400
919-854-1401 (Fax)

CERTIFICATION OF TRANSMISSION

I hereby certify that this correspondence is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4) to the U.S. Patent and Trademark Office on August 27, 2008.


Michele P. McMahan